# L___ATION-BASED IDENTIFICATIO___R USE IN A
# COMMUNICATIONS NETWORK

## ABSTRACT OF THE DISCLOSURE

A method and apparatus for implementing location-based identification in a communication network. The method comprises establishing a network connection between a host and a network, transmitting network data packets from the host through a connection port, transmitting data packets from the host through a location-specific connection port and identifying the port at an access concentrator in the form

10  of a port identifier. The port identifier is then communicated to a network device, typically a gateway device, and stored in a database in communication with the network device. In another embodiment the method includes tagging the network packets at the access concentrator with a port identifier that corresponds to a media access control (MAC) address. The access concentrator and the network device will

15  tag and communicate port numbers by assigning VLAN (Virtual Local Area Network) identifiers to the ports. In a further embodiment the method includes transmitting a port identifying query from a network device, typically a gateway device, to an access concentrator and sending a port identifying response from the access concentrator to the network device. The network device and the access

20  concentrator will have corresponding agents configured to send and respond to queries. The invention also provides for a network apparatus that includes a processor that is capable of communicating with an access concentrator to determine the port identity corresponding to a data packet MAC address. The network device is then able to use the location-based identities to structure billing schemes and manage

25  the overall network that the service provider has established. The invention is further defined in a method for using location-based identification in a communications system. A network device, typically a gateway device accesses a database to determine the identification status of connection ports within a communications network. The identification status of the connection ports are then used to execute a

30  network system application such as billing, authentication or any other network management application.

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